Gable Mounted Power Vent

Installation Instructions

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GAF MATERIALS CORPORATION

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WARNING

COMPLETE AND RETURN WARRANTY REGISTRATION FORM ON BACK COVER.
(Warranty registration not required for coverage).
SAVE these instructions. **READ** all instructions before starting the installation.

To reduce the risk of fire, electric shock or injury to persons, observe the following precautions:

1. Use appropriate safety glasses, gloves, hard hats, restraints and other equipment to avoid accidents.
2. Observe all applicable building codes.
3. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
4. Before servicing or cleaning unit, switch power off at service panel and lock service disconnecting means (power supply) to prevent power from being switched on accidentally. When the service disconnecting means (power supply) cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
5. Installation work and electrical wiring must be done by qualified person(s), in accordance with all applicable codes and standards, including fire rated construction.
6. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
7. When cutting or drilling into walls or ceiling, do not damage electrical wiring or other hidden utilities.
8. Ducted fans must always be vented to the outdoors.
9. Do not remove load bearing supports when installing this unit.
10. **Make sure blade is on tight. Ensure the set screw is securely tightened.**

CAUTION:

For general ventilating use only. **Do not use to exhaust hazardous or explosive materials and/or vapors.** This fan has an unguarded impeller. **Do not use in locations readily accessible to people or animals.**

WARNING:

Do not use an extension cord. This fan must be connected to a 120 volt, 60 Hz, grounded circuit only. **Do not use this fan with any solid state speed control.** To reduce the risk of fire or electrical shock, use only with manufacturer approved controls. Do not use on a roof pitch below 2/12.

TOOLS REQUIRED:

- Drill
- Power Saber or Jig Saw and/or Handsaw
- Extension Cord
- Safety Eyewear
- Utility Knife
- Ladder
- Claw Hammer
- Screw Driver
- Pencil or Marker

1 FOR PROPER ATTIC VENTILATION---INTAKE*

ATTIC SIZE (SQ. FT.)	MODEL#	SQ. IN. REQUIRED	# OF UNDEREAVE VENTS				# OF 8 ft. LSV8 SOFFIT VENTS	FASCIA VENTS	
			EAC 16x8	EAC 16x6	EAC 16x4	EAP 412		2080 COBRA® 1" x 3" x 100'	2085 COBRA® 1.5" x 3" x 100'
UP TO 1600	PGI	600	10	14	24	28	8	55	38
	PG2	740	12	17	29	34	10	68	47
	PG3	768	12	18	30	35	10	70	48
UP TO 2400	PG2	740	12	17	29	34	10	68	47
	PG3	768	12	18	30	35	10	70	48
UP TO 3200	PG3	768	12	18	30	35	10	70	48
								SQ. FT. REQUIRED	

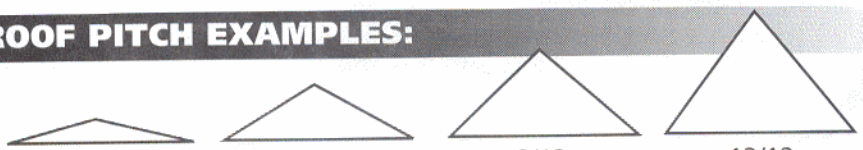
* Always have a balanced ventilation system. In no case should the amount of exhaust ventilation exceed the amount of intake ventilation.

NUMBER OF GABLE MOUNT POWER VENTS REQUIRED

Attic Square Foot	Model #	Roof pitch 3/12	Roof pitch 6/12	Roof pitch 9/12	Roof pitch 12/12
800	PG1	1	1	1	1
	PG2	1	1	1	1
	PG3	1	1	1	1
1200	PG1	1	1	1	2
	PG2	1	1	1	2
	PG3	1	1	1	1
1600	PG1	1	2	2	NR
	PG2	1	1	2	2
	PG3	1	1	2	2
2000	PG1	2	2	NR	NR
	PG2	1	2	2	NR
	PG3	1	2	2	NR
2400	PG1	2	2	NR	NR
	PG2	2	2	NR	NR
	PG3	1	2	2	NR
2800	PG1	2	2	NR	NR
	PG2	2	2	NR	NR
	PG3	1	2	NR	NR
3200	PG1	2	NR	NR	NR
	PG2	2	2	NR	NR
	PG3	1	2	NR	NR

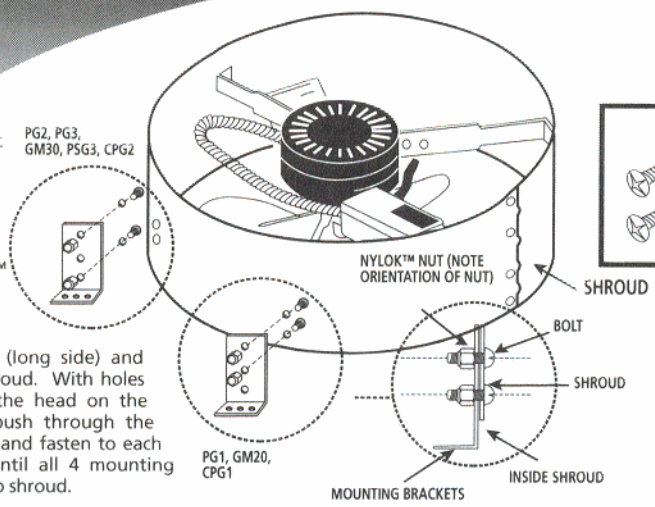
NOTE: When using more than one gable mounted power vent, it is critical that adequate intake ventilation, preferably undereave or soffit, is available. If only gable louver intake is available, **never install more than one gable mount power vent.**
NR = NOT RECOMMENDED

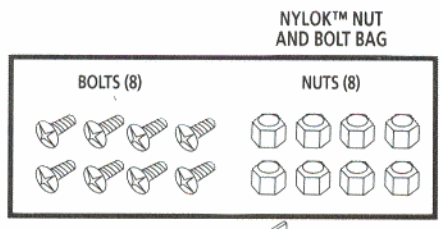
ROOF PITCH EXAMPLES:

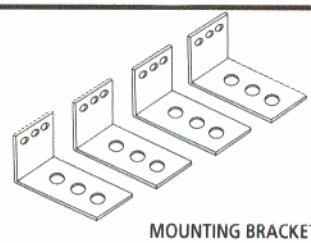


2

- Carefully remove power attic ventilator from carton.
- Remove assembly hardware kit from carton.
- Kit includes 8 bolts, 8 Nylok™ nuts and 4 mounting brackets.







Take the mounting bracket (long side) and align with 2 holes on the shroud. With holes aligned, take 2 bolts with the head on the inside of the shroud and push through the holes. Take the Nylok™ nuts and fasten to each bolt. Repeat these steps until all 4 mounting brackets are firmly fastened to shroud.

3

- Place mounting brackets so end is flush with stud. Mount on gable end, behind existing louvers (Fig. 3 or 4), or install behind MASTERFLOW™ Automatic Gable Shutter, part number SGM20 (sold separately).

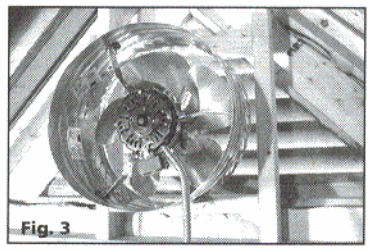


Fig. 3

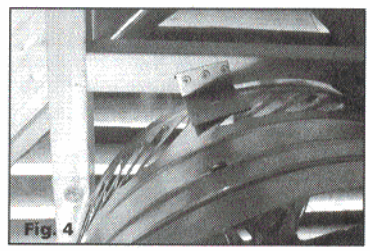


Fig. 4

4

- For studs 16" on center, screw or nail unit to framing through pre-punched mounting brackets (Fig. 5).
- For studs over 16" on center, install two 2 x 4 supports, 14" apart. Mount the unit, with screws or nails, to the supports through the pre-punched brackets (Fig. 6).

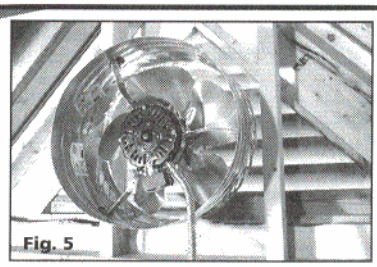


Fig. 5

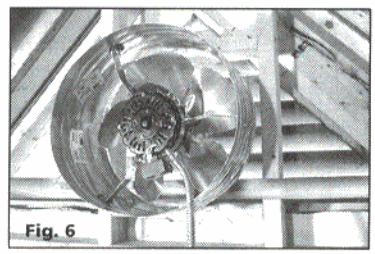


Fig. 6

ALL UNITS

CAUTION: Automatically operated device. Disconnect power supply before wiring the ventilator into existing circuit. Be sure fan blades turn freely before restoring power. All wiring must be in accordance with state and local codes.
NOTE: FOR HOMES WITH A GAS FURNACE LOCATED IN THE ATTIC. The ventilator must be wired with a switch or other interlocking device to prevent the furnace and ventilator from operating at the same time during the heating cycle. We recommend that this switch (not provided) be installed by a qualified person in accordance with all applicable codes and standards.

5 ALL GABLE MOUNT UNITS

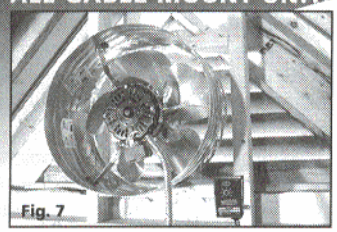


Fig. 7

WIRING--All Units, PT-6 Thermostat

- Remove the thermostat cover.
- Mount the thermostat to the edge of an adjacent stud or rafter using pre-punched holes in the box as shown in Fig. 7.
- **Make sure that the thermostat element opening on the back of the box is not covered.**
- Leave the flexible conduit somewhat slack.
- Wire the thermostat as shown in Fig. 8.
- The PT-6 is adjustable from 60˚F to 120˚F.
- The recommended temperature setting for best energy savings is 105˚F.

Each Power Vent Must Have Its Own Thermostat.

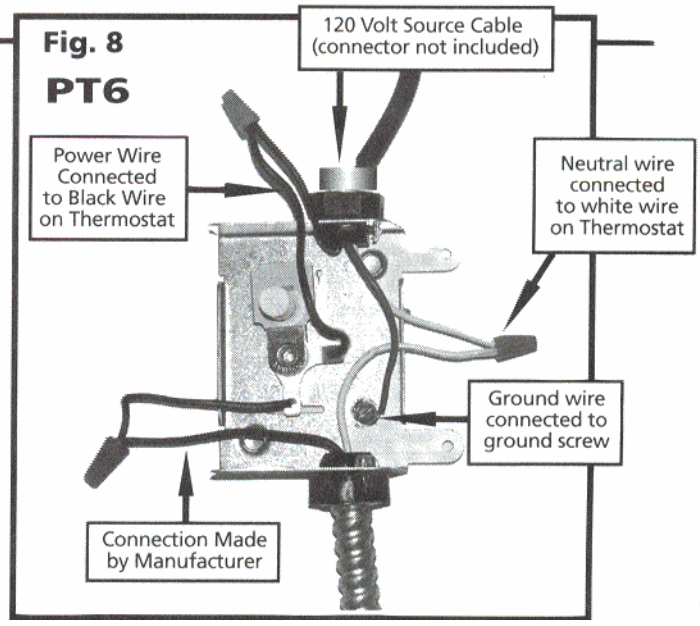


Fig. 8
PT6
120 Volt Source Cable (connector not included)
Power Wire Connected to Black Wire on Thermostat
Neutral wire connected to white wire on Thermostat
Ground wire connected to ground screw
Connection Made by Manufacturer

Q&A QUICK RESPONSE GUIDE ON GABLE MOUNT POWER VENTS

APPLICATIONS

Can I use a power vent to do something other than vent my attic?

Power vents are designed for general venting of attics. They are NOT recommended for venting ovens or other cooking appliances, paint fumes, sawdust, indoor pools, jacuzzis, saunas, showers, tubs or hazardous or explosive vapors or materials.

DUCTING

I want to install a power vent on a duct. What size should I use?

Power vents should NOT be installed on any type of duct.

EXHAUST VENTS

What should I do with the exhaust vents that are on my roof after I install the power vent?

We recommend that you remove or block other exhaust vents when you install a power vent. This includes roof louvers and ridge vents.This prevents them from acting as intake vents when the power vent is running. If left open, air may 'short cycle,' entering from roof louvers close to the power vent and back out again, leaving large areas of the attic stagnant. The exposed roof louvers are also more likely to pull in rain or snow.

FIRE

Can the motor catch fire?

All of our motors have a built-in, thermally operated overload which will interrupt power to the motor in the event that the motor windings overheat for any reason.

FIRESTAT

What is a Firestat?

It's a temperature operated safety device that stops fan operation if the temperature gets high enough to indicate the possibility of a fire. This keeps the appliance from fanning the fire.

Do the units come with Firestats?

No, the UL/CSA tested and approved thermal overload in the motor provides sufficient protection. If local codes require a separate firestat, we recommend that licensed HVAC or electrical contractor be contacted for installation.

HUMIDISTAT

What is a Humidistat?

A humidistat is used to operate a fan based on a rise in relative humidity instead of a rise in temperature. A humidistat can be used along with a thermostat to control both heat and moisture buildup. Our model H1 uses a moisture sensitive membrane which lengthens or shortens as the relative humidity changes.

Do I need a Humidistat?

Not everyone needs a humidistat. If you have noticed a problem with moisture condensing in your attic, you should consider installing a humidistat and check for items that can contribute to attic humidity.

What causes attic moisture?

Moisture, in the form of a gas, will travel with air from inside the house through ceiling materials and insulation into the attic. When the attic is cooler than the house, as in the winter, the air cools and loses its ability to hold this moisture which then begins to condense. Moisture comes from every day living activities such as cooking, bathing, and even breathing. Humidifiers add a great deal of moisture and can be a major factor, especially in homes which don't have a vapor barrier installed between the living areas and the attic. Also, be sure that all bathroom and kitchen exhaust fans and dryers are vented to the outside, not into the attic.

What should I set the humidistat on in summer?

You may want to set the humidistat to STOP in summer. This will keep it from running needlessly, as humidity control is in most instances only needed in winter.

What should I set the humidistat on in winter?

We recommend that you start by setting the humidistat at 70%. Monitor the attic conditions and adjust if necessary, lowering the setting if there appears to be an excess of moisture, raising it if the fan seems to run too long.

What is the amp rating on the H1 humidistat?

The humidistat is rated for loads up to 7.5 amps at 120 volts. Each fan unit should have its own humidistat.

MOTOR

How often should I oil the motor?

Our power vents do not require the motor to be oiled.

Q&A

THERMOSTATS

What temperature should I set the thermostat at?
Recommended setting is 105°F, fan 'ON' temperature, for the most effective operation.

How high (or low) does the thermostat go?
The PT6 thermostat adjusts from 60°F to 120°F degrees. Turned all the way counter-clockwise (cooler), fan comes on at 76°F. Turned all the way clockwise (hotter), the fan comes on at 115°F. In the normal setting, the fan comes on at approximately 100°F.

What's the amp rating on the thermostat?
The PT6 has a maximum Full Load Amp (FLA.) rating of 6 amps at 120 volts. Each fan should have its own thermostat.

Can I use your thermostat on a 1/3 (etc.) hp motor?
As a safety factor, the motor amps should not be more than 75% of the thermostat amp rating.

Can I run two units on one thermostat?
Each fan should have its own thermostat. Running two or more units on one thermostat is not recommended.

Does it matter which black thermostat wire connects to the motor and which one connects to the house power?
No, it makes no difference on PT6 thermostats.

THERMOSTAT NOT ACCURATE

The fan doesn't turn off/on at the temperature setting. Is it defective?
The thermostats which come with the single speed units are tested to be accurate to +/- 5 degrees F. The "differential" (the difference between the ON temperature and the OFF temperature), will vary from 5 to 15 degrees. While it may seem like a very broad range, these units are designed to vent hot air out of attics, an application which doesn't call for a high degree of accuracy. Installation may be a factor with units that don't turn off. There is an opening in the back of the thermostat box which must be left uncovered so that air can get into the thermostat element. If it is covered, it causes longer run times.

WIRING WITH ATTIC FURNACE

Your instructions say to install a special switch because I have a furnace in my attic. Why?
The concern is when the furnace, and this applies only to gas or oil furnaces, operates in heating mode. It is not a problem if the power vent runs when the air conditioning is running. Additionally, heat pumps with electric heat elements, and all electric furnaces are not affected by power vents. There are occasions, in Spring and Fall, when temperatures are such that your attic may be warm enough for the power vent to come on even though the house is cool enough for the furnace to operate. At these times it is possible for the power vent to disrupt the draft in the furnace flue, causing combustion products to concentrate in the attic space and creating the potential for flue gases to get into the living area. Using a power vent with a humidistat will also create periods when both the furnace and power vent will operate simultaneously. The best course, particularly when a humidistat is installed on the power vent, is to have a licensed electrician or heating and air conditioning contractor install a lockout relay which will automatically cut the power vent when the furnace comes on. The minimum precaution is a switch which will turn the power vent off during the heating season.

WIRING

What size wire should I use?
The wire size to use depends on the size of the circuit breaker that controls the circuit on which the unit is installed. A 15-amp breaker requires a minimum 14-gauge wire. A 20-amp breaker requires a minimum 12-gauge wire.

What kind of wire should I use?
Most codes permit the use of Romex type wire for most interior applications. If there is any doubt, customers should check with their local building dept.

Can I use an extension cord and just plug it in?
NO, the unit should not be wired using an extension cord. It should be wired, according to national and local codes, to a 120 V, 60HZ, grounded circuit.

Do I have to put in a new circuit for this power vent?
In most cases, these units can be installed on an existing circuit without a problem. Occasionally, they may cause a circuit, which is already at or close to maximum capacity, to overload. A breaker which trips occasionally, even though all the appliances on the circuit seem to be working well, may indicate the need for a new circuit.